



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

An extended account of the life-history of *Phryganidia californica* Packard is published by Messrs. V. L. Kellogg and T. J. Jack in the Proceedings California Academy of Sciences (Ser. 2, V, 562-570.)

Prof. J. B. Smith issues as Bulletin 111 of the New Jersey Experiment Station an account of experiments with "Raupenlime" and "Dendrolene," substances useful for applying to tree trunks to keep out borers.

---

## PSYCHOLOGY.<sup>1</sup>

**American Psychological Association.**—The American Psychological Association held its annual meeting this year at the University of Pennsylvania, in connection with the meetings of the scientific societies affiliated with the American Society of Naturalists. Hitherto the Psychological Association has met independently, but the feeling has been growing that the close relation between the more recent forms of psychology and the biological sciences made it eminently suitable and desirable that their representatives should be brought together. The success which has attended this first step makes it probable that the policy will be continued in future.

No official outline of the proceedings of the Psychological Association is at hand, and any account written from memory will be more or less defective. Consequently the present writer must beg indulgence from those whose words he endeavors to report if he has, in any case, misrepresented them. On the whole, however, he believes he is giving a fair outline of the more important points.

At the first session, on Friday, Dec. 27th, the opening paper, on "Physiology and Psychology," was read by Prof. George S. Fullerton of the University of Pennsylvania. Two years ago, at the New York meeting of the Association, Prof. Fullerton outlined the relation in which psychology as a natural science stands to metaphysic, and concluded that psychology should adopt, as far as possible, the methods and assumptions of the other natural sciences, and should relegate the task of criticising those assumptions to a distinct science—that of metaphysic. The paper read this year was a continuation of the same general line of thought in the investigation of the relations of psychology and physiology. Taking Foster's "Physiology" as a standard, we find, said Prof. Fullerton, that the author is absolutely unable to give any

<sup>1</sup> This department is edited by Dr. Wm. Romaine Newbold, University of Pennsylvania.

account of the functioning of the higher nervous centres without having recourse to sensations, ideas, volitions—in a word, without entering the field that properly belongs to psychology. While it may be not only right, but also necessary, for the physiologist to do this, we must not close our eyes to the fact that the mere fact of its necessity proves the imperfect condition of physiology, and tends to obscure the line dividing physiology from psychology. Prof. Fullerton claimed that the methods employed by the two sciences are distinct, and that it is important to the advancement of knowledge to recognize this distinction.

Dr. Livingston Farrand, of Columbia, submitted a scheme of physical and mental tests which will be used with the students of Columbia to determine, as far as can be done by direct experiment, their capacities in both respects at various stages of their college life. After some discussion, a motion was passed that the President be requested to appoint a committee of five to report upon the advisability of the universities represented taking concerted action in the adoption of some similar scheme.

Dr. Arthur MacDonald, of Washington, D. C., read a paper on "Some Psycho Neural Data." He reported experiments somewhat similar to those of Dr. Farrand, made upon certain groups in the community, and apparently showing that between definite classes definite physical and mental differences are experimentally discoverable.

Prof. Lightner Witmer, of the University of Pennsylvania, introduced one of his graduate students, Mr. Oliver Cornman, who reported the results of "An Experimental Investigations of the Processes of Ideation." Mr. Cornman's method was that of giving a large number of individuals, usually children, a definite suggestion and requiring them to write for a definite period of time—usually 15 minutes—all the thoughts directly or indirectly suggested by it; he had found that in most of his subjects the idea trains were, for a short time, largely controlled by the concomitant suggestions of the time and place, and consequently the earlier terms of each series showed a marked similarity. This soon disappeared, and the further development of the idea trains seemed dependent upon the character and previous experience of the individual. We have, therefore, in this, a convenient method of "tapping," as it were, the ideational content of the individual. Mr. Cornman pointed out further, that, to get results at all comparable with one another in the case of different bodies of subjects, the original suggestions must be given in identically the same words without explanations or further suggestions on the part of the experimenter, and, to secure this end, should always be written.

At the afternoon session on Friday, Prof. J. McK. Cattell, of Columbia, read his President's Address. It was, on the whole, a defense of that experimental method of which he is the leading representative in this country, and was, therefore, in a way, a reply to the rather unfavorable estimate of the method and its results which had been expressed by Prof. James of Harvard in his President's Address of the preceding year. The burden of Prof. Cattell's argument was found in the statement, that every science is either genetic or quantitative in its method; that those sciences which have been predominantly quantitative will undoubtedly, in time, be formulated in genetic terms, that, conversely, into the genetic sciences also, such as biology and psychology, the quantitative method will ultimately be introduced. This is the aim of experimental psychology in the narrower sense. While expressing the strongest conviction of the importance of this experimental method to the science of psychology, Prof. Cattell displayed such moderation in his estimate of the results thus far achieved by it, and such sympathetic insight into the aims and relative values of other methods, that his address was received with the warmest applause by all, and no one could be found to pass a criticism upon it.

Prof. Chas. A. Strong, of the University of Chicago, read a paper on "Consciousness and Time," of which, on account of its exceedingly abstract character, I could not venture to give an analysis from memory.

The morning of Saturday, December 28th, was occupied by a discussion on "Consciousness and Evolution."

Prof. William James, of Harvard, opened the discussion by outlining the general features of the problem at issue: First, whether consciousness is coextensive with the universe or originated in time; second, whether consciousness is an active force capable of controlling brain movement, or whether it is a mere epiphenomenon, produced by the brain but not capable of affecting the brain; third, whether consciousness has been a factor in the production of adaptation.

Prof. Cope, of the University of Pennsylvania, who had been especially requested to take the leading part in the discussion, attacked the question from the point of view of the paleontologist. He held that natural selection is not sufficient to account for adaptation, that the adaptation of the individual organ is the result of use, and that the effects of use can be inherited. In supporting this position he gave many illustrations, based upon his personal observation. He held further that organic evolution involved combinations and recombinations of matter which not only never could have been produced by the opera-

tion of known physical and chemical forces, but were of a character precisely the opposite of their known effects. To account for this, he thought we must assume in organic matter the existence of an activity distinct from all the other activities of nature. Progressive evolution is the chief outcome of this activity, and therefore he had proposed to term it an anagenetic, or upbuilding activity, as opposed to the katabenetic or destructive activities of physics and chemistry. This anagenetic activity Prof. Cope was inclined to believe due to the presence of sensation, and therefore maintained that consciousness is an active factor in the individual and in evolution.

Prof. Cope was followed by Prof. J. Mark Baldwin, of Princeton, who commented upon several points of Prof. Cope's argument, drawing special attention to the fact that recent investigation into the effect on young children of their surroundings makes it more easy to account for adaptation without reference to inheritance of acquired aptitudes. He also deplored the sharp antithesis between the doctrine of consciousness as a cause and as an epiphenomenon, holding that both views found their reconciliation in monism.

Prof. C. Sedgwick Minot, of Harvard, attacked the neo-Lamarckian doctrine from the neo-Darwinian point of view, supporting his position by evidence drawn from his own work in embryology. He suggested, as a speculation, that consciousness, although not itself a force, might be conceived to possess the property of selecting out of the brain forces that one which it is to control conduct.

Prof. G. S. Ladd, of Yale, welcomed Prof. Cope's address as an important contribution from the purely scientific point of view to the support of doctrines held by himself in common with many other metaphysicians, and made a plea for the recognition of the metaphysician on the part of scientists as a coworker in the field of knowledge.

Prof. Fullerton, of the University, called attention to our actual ignorance on all these points, and expressed the opinion that fundamental differences exist which cannot be glossed over by such vague doctrines as that of monism.

Other speakers were: Prof. J. H. Hyslop, of Columbia; Dr. D. S. Miller, of Bryn Mawr, and Dr. Wesley Mills, of McGill University, Montreal.

Prof. Cope then concluded the discussion by adducing a series of arguments in favor of the inheritance of acquired attributes, any one of which, he held, would be sufficient to set the matter at rest.

At the afternoon session, Prof. G. T. W. Patrick, of the University of Iowa, reported an experiment on the effects of loss of sleep. A patient

had been kept awake for 90 consecutive hours, during which time careful experimental tests were made of his physical and mental condition, and the results were reported in detail. Among the more interesting of these results were, continuous increase in weight, relatively slight loss of muscular strength, the production of visual hallucinations, and the sudden disappearance of all symptoms after only  $10\frac{1}{2}$  hours of sleep—about 25 per cent. of that which had been lost.

Prof. Wesley Mills, of McGill University, Montreal, announced his intention of contributing at the next meeting of the Association further researches on the psychic development of young animals and its physical correlations.

Prof. Lightner Witmer, of the University of Pennsylvania, read a paper on "Variations in the Patellar Reflex as an Aid in Mental Analysis." Dr. Witmer described the apparatus and the method used to determine, 1st, The extent of the normal jerk; 2d, the increment due to the synergic activity of the cortical processes concerned in sensation, thoughts, etc. His results he regarded as tentative only; they appeared, however, to show (1) that sensation or thought processes which did not directly tend to produce movement had little effect upon the knee jerk; (2) that all processes which tended to produce muscular contraction in any part of the body tended to increase the knee jerk; (3) that this increase was quite as marked in the case of the *thought* of a movement as in that of the movement itself.

Prof. James H. Hyslop, of Columbia, reported a series of experiments on hallucinations induced by a crystal. He did not attempt to give any explanation of the phenomena, but pointed out that in two cases the phantasms possibly indicated some unknown method of acquiring information.

Prof. W. R. Newbold narrated informally three cases vaguely described as "Dream Reasoning," which had occurred in the experience of two of his colleagues. Dr. W. A. Lamberton, Professor of Greek in the University of Pennsylvania, when a young man, after giving up as insoluble a problem in descriptive geometry upon which he had been working for weeks by the analytical method, awoke one morning several days later to find an hallucinatory figure projected upon a blackboard in his room with all the lines necessary to a geometrical solution of the problem clearly drawn. He has never had any other visual hallucination. Dr. H. V. Hilprecht, Professor of Assyriology in the University of Pennsylvania, some years ago dreamed an interpretation of the name Nebuchadnezzar which has since been universally adopted. At a later period he dreamed that an Assyrian priest

gave him information about some inscribed fragments that had puzzled him which was afterwards confirmed in all points now capable of confirmation. Dr. Newbold offered a psychological explanation of these curious cases.

Prof. G. S. Fullerton, of the University of Pennsylvania, was elected President, and Dr. Livingston Farrand, of Columbia, Secretary, for the ensuing year.

Among the members present, besides those already mentioned, were Mr. Henry Rutgers Marshall, of New York; Prof. N. S. Gardiner, of Smith College; Dr. H. C. Warren, of Princeton; Prof. E. S. Sanford, of Clarke University; Prof. E. H. Griffen, of Johns Hopkins; Prof. J. C. Creighton, of Cornell; Prof. James Seth, of Brown, and Dr. Warner Fite, of Williams' College.—W. R. N.

**The Cat's Funeral.**—Every one has observed instances of affection between those proverbially hostile animals, the dog and the cat, but a case cited by l'Eleveur merits especial attention. A dog and a cat belonging to the same master were the best friends in the world, and spent their time in frolicking together. One day, while playing as usual, the cat died suddenly, falling at the dog's feet. The latter, at first, did not realize what had happened, but continued his play, pulling, pushing and caressing his companion, but with evident astonishment at her inertness. After some time he appeared to understand the situation, and his grief found vent in prolonged howls. Presently he was seized with the idea of burying the cat. He pulled her into the garden, where he soon dug a hole with his paws, and put in it the body of his former companion. He then refilled the hole with dirt, and, stretching himself out on the grave, resumed his mournful howling. The idea of burying the dead cat was extraordinary. Whence came the thought? Could it be imitation, or, which is a better explanation, did the dog have a vague idea of concealing the event which might possibly be imputed to him. But then it would seem unreasonable for him to call attention to the fact, by installing himself on the grave and howling. However, even human criminals are sometimes equally inconsistent. It is difficult to form an exact idea of what gave rise to the dog's conduct in this case. (*Revue Scientific Juillet, 1895*).—E. D. C.